HOSPITAL DEPARTMENT SURGEONS

LOCATION	NAME	TITLE
San Francisco	Dr. V. M. Strange....	Chief Surgeon
San Diego...	Dr. T. F. O'Connell...	Dist. Phys. & Surg.
San Diego...	Dr. Guy E. Maggio...	Asst. Dist. Phys. & Surg.
San Diego...	Dr. P. S. Mountjoy....	Asst. Dist. Phys. & Surg.
San Diego...	Dr. G. P. Lauren.....	Oculist and Aurist
San Diego...	Dr. John C. Holman...	Dermatologist
Tijuana.....	Dr. G. J. Palofox.....	Dist. Phys. & Surg.
Tecate.....	Dr. Manuel V. Aguilar.	Dist. Phys. & Surg.
Tecate.....	Dr. Jose de Anda Gonzalez.....	Dist. Phys. & Surg.
El Centro....	Dr. John E. Haworth..	Dist. Phys. & Surg.
El Centro....	Desert Medical Group.	Emergency Surgeons

Note.—Emergency surgeons should only be summoned for temporary treatment when prompt attention is required and when patients cannot be sent to or await arrival of Division or District Surgeon.

HOSPITALS

GENERAL HOSPITAL.....SAN FRANCISCO, CALIF.
MERCY HOSPITAL
.....HILLCREST DRIVE, SAN DIEGO, CALIF.

WATCH INSPECTORS

San Francisco.....K. I. Dunlap, Manager of Time Service, 65 Market Street
La Mesa.....Emery Grant, 8049-A La Mesa Blvd.
El Centro.....Henry's Jewelers, 522 Main St.

SPEED TABLE

TIME PER KILOMETER	TIME PER MILE	MILES PER HOUR
1'03"	1'42".....	35
1'05"	1'45".....	34
1'08"	1'49".....	33
1'10"	1'52".....	32
1'12"	1'56".....	31
1'15"	2'00".....	30
1'17"	2'04".....	29
1'20"	2'08".....	28
1'23"	2'13".....	27
1'26"	2'18".....	26
1'29"	2'24".....	25
1'33"	2'30".....	24
1'37"	2'36".....	23
1'41"	2'43".....	22
1'46"	2'51".....	21
1'52"	3'00".....	20
1'57"	3'09".....	19
2'04"	3'20".....	18
2'11"	3'31".....	17
2'20"	3'45".....	16
2'29"	4'00".....	15
3'06"	5'00".....	12
3'44"	6'00".....	10
4'40"	7'30".....	8
6'13"	10'00".....	6

SAN DIEGO & ARIZONA EASTERN RAILWAY COMPANY

TIJUANA AND TECATE RAILWAY COMPANY

TIMETABLE

89

EFFECTIVE THURSDAY, JUNE 1, 1967
AT 12:01 A.M.
PACIFIC STANDARD TIME

FOR THE GOVERNMENT AND INFORMATION OF EMPLOYES ONLY

J. H. LONG
Vice President and General Manager

W. B. BARKER
Superintendent

TRAINMASTER
J. L. GREEN

CHIEF TRAIN DISPATCHER
E. A. NIGHSWONGER

Eastward Second Class 452 Freight Leave Daily	Mile Post or Kilometer Post		STATIONS Siding Capacities and Facilities		Station Number	Distance from El Centro	Westward Second Class 451 Freight Arrive Daily
AM 7.30	1.1	TO-R	SAN DIEGO BKDYP	S.D.&A.E.Ry.	48540	147.0	PM 5.20
	4.8	Yard Limits	Twelfth St. Natl. City P		48370	143.3	
	7.4		CHULA VISTA JCT. P		48350	140.7	
7.52	9.1		CHULA VISTA		48340	139.0	4.56
7.56	11.1		PALM CITY P		48320	137.0	4.51
8.05	15.5	TO-R	SAN YSIDRO KP		48310	132.6	4.40
8.20	K 0.1	R	TIJUANA P	T.&T.Ry.	48270	131.9	4.30
8.25	K 4.1		AGUA CALIENTE		48260	129.6	4.25
9.05	K 33.9		REDONDO P		48220	111.5	3.45
9.45	K 59.9	Yd.Lmts. R	TECATE P		48210	95.3	3.05
10.04	60.3		DIVISION P	S.D.&A.E.Ry.	48190	87.8	2.43
10.20	65.8	Yd.Lmts. TO	CAMPO P		48180	82.3	2.30
10.35	71.9	28	CLOVER FLAT P		48170	76.2	2.15
11.04	84.5	38	HIPASS P		48150	63.6	1.46
11.27	92.9		JACUMBA P		48140	55.2	1.23
11.29	94.0	31	TITUS P		48130	54.1	1.21
	96.0		DUBBERS		48125	52.1	
AM 11.53	100.7		CARRISO GORGE P		48120	47.4	12.57
PM 12.01	102.3		TUNNEL 15 SPUR P		48115	45.8	12.47
12.25	109.7	50	DOS CABEZAS P		48110	38.4	12.25 PM
12.56	122.5	39	COYOTE WELLS P		48105	25.6	11.53 AM
1.11	130.0	Yd.Lmts. TO	PLASTER CITY P		48080	18.1	11.37
1.31	139.8	Yd.Lmts.	SEELEY P		48060	8.3	11.17
1.42	145.1		WILSIE		48040	3.0	11.06
1.50 PM	148.1	Yd.Lmts. TO-R	EL CENTRO BKDYP		48000	0.0	11.01 AM
Arrive Daily			(147.0)				Leave Daily
452							451

RULE S-72. Exception: No. 452 is superior to No. 451.

Eastward Mile Post Location		CORONADO BRANCH STATIONS Siding Capacities and Facilities	Station Number	Westward Distance from North Island
4.8	Yard Limits	TWELFTH ST., Natl. City P	48370	16.5
5.7		24th St. Natl. City	48410	15.6
7.4		F STREET JCT.	48420	13.9
9.9		SALT WORKS	48440	11.4
18.3		TENT CITY	48450	3.0
19.4		CORONADO	48460	1.9
21.3		NORTH ISLAND	48470	0.0
		(16.5)		

Note.—Navy tracks used beyond MP 21.3.

Eastward Mile Post Location		LA MESA BRANCH STATIONS Siding Capacities and Facilities	Station Number	Westward Distance from El Cajon
1.1	TO-R	SAN DIEGO BKDYP	48540	15.7
10.3	Yard Limits	LEMON GROVE	48620	6.5
12.3		LA MESA	48630	4.5
15.3		GROSSMONT	48640	1.5
16.8		EL CAJON	48650	0.0
		(15.7)		

ADDITIONAL STATIONS

Capacity and Direction of Entry into Spurs	Mile Post	Name	Station No.
.. W	5.8	Bahia Vista-Natl. City. (Spur)	48360
48 W	10.1	Otay..... (Spur)	48330
.. W	13.0	Baird-Roll..... (Spurs)	48315
4 E	K 5.9	Standard..... (Spur)	48250
23 E	K 13.6	Garcia..... (Spur)	48240
15 E	K 19.2	Matanuca..... (Spur)	48230
6 E	137.1	Edgar..... (Spur)	48070
		Coronado Branch	
.. E	8.2	Rohr..... (Spur)	48430
		La Mesa Branch	
.. E-W	7.2	Encanto..... (Spurs)	48610

RULE A. Employes must know they have in their possession copy of Rules and Regulations of the Transportation Department effective July 1, 1960, page revisions listed on page 1, revised April 1, 1961.

RULE M. Employes are prohibited from getting on top of any box or other house cars not equipped with a roof running board except when necessary to make repairs.

Employes may ride on roof of cars equipped with roof running board when necessary during switching operations, but must not cross from the roof of one car to another while in motion.

Employes are warned that it is dangerous to ride on top or side of cars while passing points where impaired clearance exists, and that they must protect themselves from injury. See list of impaired clearances on main track and siding.

There are numerous other structures with impaired clearance on yard and station tracks on the division, and employes must be familiar with their location and avoid personal injury.

RULE 1. Form prescribed for recording variations of standard clock with time signal has been discontinued.

RULE 10-G. First paragraph is revised to read:

"When an unattended red flag or red light is displayed to the right of track in direction of approach, train, after stopping, must be preceded for a distance of one-half mile from point where signal is displayed, by a flagman who must carefully examine track and structures."

RULES 10-G and 10-H. When unattended red flags, red lights or yellow signals are displayed between siding switches, they must be duplicated to right of track in direction of approach. If clearance between siding and main track does not permit display of these signals to right of track in direction of approach, signals may be displayed to left of track in direction of approach. Display of these signals to the left of siding in direction of approach must be respected as though they were displayed in accordance with these rules.

RULE 10-H. First sentence is revised to read:

"When a yellow signal is required it will be displayed to the right of track in direction of approach, one-half mile from structure or track over which speed of trains must be restricted."

RULE 10-J. Second paragraph is revised to read:

"Speed signs that prescribe reduction in speed will be located one-fourth mile from initial point of restriction."

RULE 15. First and second paragraphs are revised to read:

"The explosion of a torpedo is a signal to proceed with caution for one-half mile.

"When a torpedo is exploded in the vicinity of a yellow signal displayed in accordance with Rule 10-H, train must proceed expecting to find an unattended red signal that may be displayed one-half mile beyond the torpedo and the yellow signal."

RULE 16(e) is cancelled.

RULE 16(k). When standing, apply or release air brakes.

RULE 17. First condition, reading as follows "Outside of CTC limits, if train is clear of main track, and has stopped," is modified to read:

If train is clear of main track and has stopped.

RULE S-17. First sentence is modified to read:

Until the headlight of a train turned out to meet another is extinguished, it is an indication that the main track is obstructed.

RULE 19. Last sentence of Item (5) is cancelled.

RULE 20. All sections, except the last, will display two green lights by day and by night in the places provided for that purpose on the front of the engine.

RULE 21. Trains must be identified by engine number designated in train order regardless of location in engine consist. Only the number designated for identification will be continuously illuminated when engine is so equipped.

RULE 21-A. Extra trains will display two white lights by day and by night in the places provided for that purpose on the front of the engine.

RULE 21-B is cancelled.

RULE 21-C is cancelled.

RULE 22. When two or more engines are coupled at the head of a train, the leading engine only will display signals; except when road engine is coupled behind a helper engine over part of a subdivision, the road engine will display signals the same as displayed on helper engine. The leading engine only will give or answer signals.

RULE 30. Engine bell must be rung continuously between the following points:

San Diego and east end of Tunnel 2; Tecate and Campo; MP 96 and MP 106; and on branches.

RULE S-72. Westward regular trains are superior to trains of the same class in the opposite direction, except as noted on page 2.

RULE 82-A. Regular trains will operate on the T&TRy by timetable authority and no train orders will be issued effecting the movement of such trains on the T&TRy.

RULE 83-B. All trains may register by ticket at San Ysidro, Tijuana and Tecate.

RULE 85. When a train of one schedule is on the time of another schedule of the same class in the same direction, it will proceed on its own schedule.

Trains of one schedule may pass trains of another schedule of the same class. Second and inferior class and extra trains may pass and run ahead of second and inferior class and extra trains.

Except as hereinafter provided, a section must not pass and run ahead of another section of the same schedule without first exchanging train orders and each assuming the other's section number, displaying signals if necessary, responsibility resting with the conductor and engineer of each section. The change in sections must be reported from the first open train-order office unless otherwise instructed. If trains are met or passed after change is made, sections involved must stop and identify themselves to such trains.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following stations:

West MP		East MP
	San Diego	K5.1 (18.7)
	" (Coronado Branch)	End of Branch
	" (La Mesa Branch)	End of Branch
K58.9	Tecate	K62.2
64.58	Campo	66.94
128.50	Plaster City	131.90
138.50	Seeley	141.90
147.20	El Centro	End of SD&AE Track

RULE 98. RAILROAD CROSSINGS NOT INTERLOCKED: At following grade crossings trains will stop not less than 50 feet nor farther than 500 feet from crossing and will proceed only on signal from flagman:

Crossing at Chula Vista. Exception—San Diego–El Centro line trains will expect to find the main track blocked and will pass over the crossing not to exceed 15 MPH.

Cars must not be kicked or shoved over railroad crossings not protected by interlocking, unless movement is properly protected.

RULE 99-C: Will apply between San Diego and El Centro.

RULE 103-A. Automatic crossing gates:

Crews of trains or engines making stop, reverse movement, movement against current of traffic or movements from sidings yard or industrial track over crossings that may be protected by wigwags, crossing bells or other automatic warning devices must know that automatic protection is operating properly before entering crossing.

Following crossings protected by gates with control circuits located within short distance of crossings:

Station	Location	MP
*Chula Cista	Moss St.	9.1
**Chula Vista	Naples St.	9.4

*Eastward or westward movement on team track or spur will not lower gates until wheels of engine or cars are approximately 25 feet from crossings (indicated by aluminum marker posts), and crews must not enter crossing until gates are down or crossing is protected by flagman.

**Eastward movement on team track or spur will not lower gates until wheels of engine or cars are approximately 50 feet west of crossing (indicated by aluminum marker post), and crews must not enter crossing until gates are down or crossing is protected by flagman.

San Diego: At Fifth Avenue, do not enter intersection until crossing signals have been operating twenty (20) seconds unless protected by a flagman. Do not kick or drop cars over crossing.

At Eighth Avenue, do not enter intersection until crossing signals have been operating twenty (20) seconds unless pro-

tected by flagman.

On L Street, engines and cars must be brought to stop before crossing 12th Avenue, and member of crew must protect traffic before moving across street.

On Richfield Spur across Harbor Drive, movements must be protected by a flagman.

Maximum speed permitted over street crossings on L St. tracks is 5 MPH.

National City: Movements on Navy spurs across Harbor Drive (foot of 13th St.) must be protected by a flagman account crossing signals not connected to these tracks.

Otay: Movements on spur across Main Street must stop at crossing and be preceded by flagman.

Coronado: Boulevard Stop signs at Fourth St., Pomona Ave. and Orange Ave. do not apply to trains.

Lemon Grove: Movements across Broadway must stop at crossing and be preceded by flagman over crossing.

La Mesa: At La Mesa Blvd. trains must stop and member of the train crew protect traffic on street. Traffic signals are pre-empted by train movements. Before entering crossing, wait not to exceed twenty (20) seconds for display of white light on signal case which will indicate traffic stopped on La Mesa Blvd. Do not leave cars between insulated joints.

El Cajon: At Main St. traffic signals are pre-empted by train movements. Before entering crossing, wait not to exceed twenty (20) seconds for display of white light on signal case which will indicate traffic stopped on Main St. Do not leave case between insulated joints.

RULE 104. The normal position of junction switches at Twelfth St., National City and Chula Vista Jct. is for the San Diego-El Centro main track.

RULE 105. Capacity of Sidings column indicates the number of cars of average length of 49 feet that siding will hold between fouling points, in addition to one engine and caboose.

When length of train and/or capacity of siding permits, trains taking siding after clearing main track will provide not less than 400 feet additional clearance to fouling points.

RULE 206. In train orders and clearances regular trains will be designated by schedule and engine numbers, thus: No. 10 engine 6051, and sections, thus: SECOND 10, engine 6001. Extras will be designated by engine numbers and the direction, thus: EXTRA 798 EAST. Work extras will be designated by engine numbers, thus: WORK EXTRA 798.

The identifying numbers permanently displayed on leading units of engines must be used in train orders and clearances. When an engine of another railroad is used, except SP or SSW Railway (Cotton Belt), the initials of that road must precede the engine number, thus: EXTRA GN 5002 EAST.

Even hours must not be used in stating time of day in train orders.

RULE 208-A. Conductor's registration of work extras terminating at San Diego may be used to annul work orders without having the engineer in the train order office.

RULE 211: Substitute signal 14(g) for signal 14(b) where this appears in first and second paragraphs of rule.

RULE 220-A is revised as follows: "Train orders relating to track conditions, unless annulled, must be respected by conductor and engineer on all trips made during the tour of duty on which such orders are received. Other train orders received by a train may be applicable to an additional trip by issuance of an order reading 'RESPECT ORDER No.....', or adding these words to the order creating the train for the additional trip.

"FORMS OF TRAIN ORDERS"

Form G, last paragraph, is revised as follows: 'When an order, Form G, is fulfilled or annulled, other forms of orders held by the extra so created, except Forms K, V, and train orders relating to track conditions, are also made void .'

In all forms of train orders where reference to regular trains is made, engine number must be used as prescribed by Rule 206.

Engine number of regular trains and sections thereof must be furnished by train order to all trains that are to be met or passed.

The designation "indicators" in Rule 19 and "train indicators" in Rules 23 and 763 as well as in train order Form S-C is changed to "engine numbers." Reference to train indicators in train order Form F should be deleted.

RULE 221. Trains must obtain clearance before leaving:
San Diego }
San Ysidro } .....Eastward trains

Tijuana, Tecate and Campo are designated as permissive block stations.

Permissive block station cards may be issued at Tijuana, Tecate or Campo by the agent or telegrapher which will authorize movement of extra trains between these stations.

The agent or telegrapher at Tijuana, Tecate or Campo must not issue a permissive block station card to an extra train after having received and acknowledged a previously issued permissive block station card by telegraph or telephone unless the extra train so authorized has arrived at his station.

When necessary to issue a permissive block station card, it must be filled out correctly, showing thereon the station, date, train addressed, station between where such movement is authorized, time issued, and then signed by the agent or telegrapher. Before delivery is made to the conductor or engineer of the train, the agent or telegrapher must transmit the contents of the permissive block station card to the terminating station which is the next permissive block station by telegraph or telephone. Agent or telegrapher at that station must acknowledge and then arrange to stop and hold all opposing trains at that station until the extra train so authorized has arrived and the conductor and engineer of the train have delivered their copies of the permissive block station card to him.

Example: If No. 451 has left Campo, permissive block station card must not be issued at Tecate until No. 451 has arrived at Tecate. If No. 452 has left Tijuana, permissive block station card must not be issued at Tecate until No. 452 has arrived at Tecate.

Conductor and engineer of an extra train authorized by a permissive block station card between Tijuana and Tecate, or Tecate and Campo must deliver all copies of the card received at the initial station of the block to the agent or telegrapher at the terminating station of the block.

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

When Signals 1022 and 1023 are in stop position, train shall stop and then proceed immediately with caution to Bridge 102.29 and await arrival of maintenance man who will inspect bridge and authorize train to proceed if safe to do so. Upon arrival at Bridge 102.29, immediately call Dispatcher or any open station and report signals in stop position.

RULE 535. Spring switches not equipped with facing point locks are located as follows, and speed indicated in Speed Restrictions table must not be exceeded while passing over them in facing movement, or in trailing through them:

Location	Normal Position
San Diego....Enginehouse lead	Main track
San Diego....Lead crossover, Sigsbee St.	Main track

Spring switches are also located on other tracks as follows:

One on enginehouse lead, and one on enginehouse tracks, San Diego.

GENERAL REGULATIONS

RULE 808. In case of grade crossing accident it is permissible for crew members on request of law enforcement officers to furnish their names, occupations and addresses; identification of the train; direction and approximate speed of the train; confirmation that the whistle, bell and headlight or headlights were operating; and direction of the vehicle. Signed statements are not to be given. Should police officers desire any additional information they should be courteously referred to Claims Department representative.

RULE 825. In addition to setting hand brakes on cars set out on a grade, wheels must be blocked. When brakes and blocking of wheels are not sufficient to hold cars, lead truck of lead car in descending direction must be chained to rail.

Rail skid, when available, must be used in lieu of block or chain.

When picking up cars on grade, inspection must be made to ascertain that chain, block or rail skid has been removed.

RULE 827. On freight and mixed trains between KP 14 and KP 19 and between Redondo and Coyote Wells, a member of crew must observe track to rear of train for evidence of derailment or any other condition requiring immediate stopping of train.

Add: Engines runnings light on descending grade without dynamic brake in operation must stop a sufficient length of

time to permit wheel heat radiation if there is indication of overheating. Stop need not be made if in the judgment of engineer it is safe to proceed.

RULE 836. Outside of yard limits cars shoved ahead of engine between stations on descending grade must be chained to the engine. When practicable engine must be kept on descending grade end of cars.

RULE 872. Enginemen when taking charge of engines at San Diego or El Centro will consider engines as having been amply supplied with fuel, sand, water, tools, supplies and flagging equipment in serviceable condition.

AIR BRAKE RULES

RULE 2: Enginemen taking charge of engine(s) at location where locomotive maintenance forces are on duty, are relieved of requirement for preparation of their engine(s).

Paragraph 1: Enginemen when taking charge of engine(s) at San Diego or El Centro will consider that condensation has been drained from reservoirs, and from moisture and dirt collectors.

Paragraph 3: Engineer when taking charge of engine(s) at San Diego or El Centro will consider sanders are operating properly.

Paragraph 4: Engineer when taking charge of engine(s) at San Diego or El Centro will consider engine wheels have been properly inspected for flat spots.

RULE 2-C. Enginemen must assure themselves that safety control valve (deadman control) is fully cut in when handling cars with train brakes cut in.

RULE 3. Standard brake pipe pressure for freight and mixed trains operating through between San Diego and El Centro is 90 pounds.

RULE 11. Cars equipped with brake cylinder release valve may have one or two operating release rods. Operating rods connected to brake cylinder release valve may be identified by stencil reading "Br.Cyl.Rel." or by a diamond shaped stencil or by noting that ends of release rod form a small closed circle. Air brakes can be released on cars equipped with a brake cylinder release valve by a hard momentary pull on release rod after brake pipe pressure has been depleted.

RULE 17. Retaining valves must be used on eastward freight and mixed trains Hipass to Jacumba and MP 106.71 to Coyote Wells as follows:

Without dynamic brake in operation, one retaining valve for each 75 tons in train.

With dynamic brake in operation and tonnage of train exceeds 950 tons per 4-axle unit or 1500 tons per 6-axle unit of dynamic brake, one retaining valve for each 100 tons in train.

With pressure maintaining system of braking in use and dynamic brake in operation and tonnage of train exceeds 2,000 tons per unit of dynamic brake, one retaining valve for each 100 tons in train.

RULE 23. The following series of cars are equipped with AB Brake system which has automatic changeover feature to provide proper brake function when car is loaded and when empty:

SSW 75700–75799	Gondolas
SSW 78500–78599	Hoppers (Open Top)
SP 333500–334399	Gondolas
SP 337500–337599	Gondolas
SP 345000–345669	Gondolas
SP 354000–354399	Gondolas
SP 463500–463999	Hoppers (Open Top)
SP 467500–467549	Hoppers (Open Top)
SP 480000–480193	Hoppers (Open Top)
SP 491000–491059	Hoppers (Covered)
SP 492000–492039	Hoppers (Covered)
SP 500604	Flat Car
SP 590000–590099	Flat Cars

Before leaving a station or point where such cars have been added to the consist, engineer must actuate the automatic changeover feature by reducing brake pipe pressure to below 20 pounds whether cars are loaded or empty.

RULE 24-F. Air must be cut in on all cars west of engine when handling cars on Commercial Street east of 16th Street, San Diego.

RULE 25. Will apply to westward trains at Hipass and to eastward trains at MP 83.5 and Culvert 106.71, except trains with dynamic brakes in operation and not required to stop for other reasons will make a running test at these locations as follows:

Engineer will make reduction of approximately 7 pounds, wait for slack to adjust itself, then add 3 pounds before releasing. Trainmen will note reduction on caboose gage and, following buildup in pressure when brakes are released, give proceed signal.

Tecate: Trains will make running test one-half mile after leaving station.

RULE 32. First paragraph is revised as follows:

When stop is made on grade independent brake must be fully applied and unless known that it will hold train, train brakes must be left applied until ready to proceed. If necessary to restore air brake pressure to safe level before proceeding, sufficient hand brakes must be set to hold train while restoring air brake pressure. After pressure has been restored to safe level, a minimum brake pipe reduction must be made to hold train while hand brakes are being released. Hand brakes must be set on rear end of train when on ascending grade and on head end of train when on descending grade.

Second paragraph is CANCELLED.

RULE 33. Freight trains handling cars with single capacity brakes (*) and with tonnage exceeding 80 tons per operative brake, must not exceed 45 MPH, except:

(1) On 1.2 to 1.5% descending grade, maximum speed must not exceed 25 MPH.

(2) On descending grade in excess of 1.5%, maximum speed must not exceed 20 MPH.

(*) **Loaded** cars with empty-load brakes are to be considered the equivalent of one and one half (1½) cars in determining tons per operative brake.

Tonnage of operating unit(s) not in dynamic braking is not to be used in determining tons per operative brake.

Descending grades where restrictions apply in Items 1 and 2 are designated below:

EASTWARD (Station) MP	to (Station) MP	% Grade	WESTWARD (Station) MP	to (Station) MP	% Grade
84.5	122.5	2.2	84.5	K-33.9	1.4

RULE 34. When necessary to use retaining valves as prescribed by Rule 17, stop must be made at MP 118.00, except that when dynamic brakes are in operation, this stop is not required if in the judgment of the conductor and engineer, wheels are not overheating and it is safe to do so.

RULE 82. Add: On departure from locomotive maintenance facility, enginemen must determine by making running air brake test that the independent and automatic brakes are operating effectively.

MISCELLANEOUS

5. Helper service.

(a) When helper engine is placed behind caboose not more than two (2) operating units or 4000 operative horsepower will be used.

(b) Helper engines consisting of not more than four units may be placed immediately ahead of caboose.

Air will be cut in on all helper engines, and engine must not be cut off when train is in motion.

11. Load limit (car and contents) . . . . . 263,000 pounds

EXCEPT

Coronado Branch, 24th St. Natl. City to MP 7, and Salt Works to North Island . . . . . 199,000 pounds

Unless authorized by Superintendent heavier loads must not be handled.

27. Should a passenger train be stopped in a tunnel, air conditioned cars within the tunnel must immediately have the air conditioning systems, including ice engines and engine generators, shut off, fresh air intake shutters closed, and blower fans shut off.

Should a train be stopped with the engine in a tunnel and it is found that, in the case of a passenger train it cannot be moved within five minutes after stopping, and in the case of a freight train it cannot be moved within a reasonable length of time, trainmen and enginemen must take necessary precautions to prevent movement. Independent brake and sufficient hand brakes must be immediately applied. Engine wheels

must be secured by blocks or chains, and power plants and steam generators, if any, on engine shut down.

28. DF-1 to 12 and DP class engines operated with engineer in other than lead unit in direction of movement, must not exceed 20 MPH when approaching highway or street crossing at grade, subject to further restrictions imposed by local conditions.

29. Employes of the SD&AERy., while performing service on tracks of the SPCo. at El Centro, are under jurisdiction of the SPCo. officers and will be governed by Rules and Regulations of the Transportation Department, timetable and bulletins of the SPCo.

SPEED RESTRICTIONS FOR ENGINES: Maximum speed shown below is subject to further restriction applicable to certain territories as shown in Speed Restrictions for Trains:

Nominal classifications are descriptive of the engines as follows:

1st letter.....Builder: A Alco: B BLH: E EMD: F Fairbanks-Morse: G GE: K Krauss-Maffia

2nd letter.....Type of service: F Freight: P Passenger: S Switcher

1st number.....Number of axles

2nd and 3rd numbers..Horsepower (100)

Last letter.....Style of unit: A Car body type with control cab. B No control cab. No letter indicated road switcher type

Nominal Class	Maximum Speed
ES406	45
AS407	60
ES408	##65
ES408B	65
ES409	##65
AS409	##60
AS410	60
BS410	60
ES410	60
BS412	60
FS412	##60
GS407	##55
EF415A	#70
EF415B	70
EF418	##70
EP418	##79
AF420	##75
EF420	##75
EF423	##75

#When on head end of train or running light and engineer is in other than a leading control cab in direction of movement, must not exceed 30 MPH.

##When operated in multiple unit control on head end of train or running light and engineer is in other than lead unit in direction of movement, must not exceed 30 MPH.

Diesel engines weighing 100,000 pounds or more moving dead in train will be placed first behind engine handling train; diesel engines weighing less than 100,000 pounds must be placed near rear of train.

MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT	MPH MAIN TRACKS OTHER THAN BRANCHES	MPH MAIN TRACKS ON BRANCHES
Double or triple loads	..	25
Scale test cars	40	30
Cars with arch-bar trucks	40	30
Steel pile-drivers	40*	30*
K&J, pedestal or center-hinged air-dump cars (except SPMW 5100 to 5289 loaded or empty)	35*	25*
Locomotive cranes:		
With boom disconnected, heavy end forward	35*	25*
With boom disconnected, light end forward	20*	15
With boom in place, either end forward	25*	15

*These speeds must not be exceeded, and on curves where authorized speed is more than 15 MPH speed must be reduced to 5 MPH less than shown in timetable and on speed signs.

Dead or disabled engines listed in timetable which requires movement at reduced speed must not be handled in train until train-order designating maximum speed is issued.

Engines handled dead must not exceed speed shown in table.

All cars handled in passenger train must be equipped with steel-tired or all-steel wheels. Cars not so equipped must move in freight trains, passengers if any, to move on passenger trains.

INTERNATIONAL BOUNDARY

Trains approaching gate at International Boundary, San Ysidro, will sound one long blast of whistle to inform Government Officials of their presence. If prompt response is not gained after whistle blast, an employe will go at once to Government Headquarters and request service.

Trains will stop before crossing International Boundary line at San Ysidro. Trains in both directions when not accompanied by Customs Immigration Rider will stop at Campo. Trains in both directions will stop at Tecate. Trains must not cross International Boundary line without first notifying Customs and Immigration Officers and obtaining necessary permission from them.

Westward trains coming into Tijuana, when not accompanied by rider, will proceed without stopping to Boundary line for inspection by Officers of the Mexican Government, after which cars for Tijuana may be set out and necessary switching performed. Mixed trains will also stop passenger equipment at depot when passengers are handled.

To permit Immigration and Customs inspection of trains while entering the United States, eastward trains departing Campo, and westward trains departing San Ysidro, must not exceed 5 MPH until rear of train passes station and proceed signal is given from caboose. Conductor will watch for signal from station force in case necessary to bring train to a stop.

30. LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE

San Diego:	Citrus Soap Co. spur: Pipes on outside of building.
"	Fire hydrant on Fourth Ave., at K St.
"	Fire hydrant, power poles and street lights along east curb line of Fifth Ave.
Tecate:	Pipe and counter weights on Malt Plant track.
"	Pilaster at NW corner of Malt building on Brewery spur will not clear man on side of car, and pipes over track 30 ft. from east end will not clear man on top of car. Overhead wires will not clear man on top of car.
"	Brewery spur: Overhead pipes on east 30 ft., and wooden platform on east 100 ft.
Plaster City:	Account reduced side clearance, Track 1, employes are forbidden to ride on side of cars while moving on this track.
	Scale track must not be used between east switch and derail or sign west of scale. Switch and derail secured with U.S.G.Co. lock.
	Do not enter U.S.G.Co. Track 4 when gypsum chute is in loading position.

INSTRUCTIONS IN CASE OF FIRE

1. FIRE FIGHTING EQUIPMENT:

(a) Five gallon fire extinguishers are located at following points:

East end Tunnel 4	West end Tunnel 14
West end Tunnel 5	West end Tunnel 15
West end Bridge 97.68	West end Tunnel 16
East end Tunnel 6	East end Tunnel 17
Both ends Tunnel 8	West end Tunnel 18
West end Tunnel 9	West end Bridge 104.01
West end Tunnel 10	West end Bridge 104.37
West end Tunnel 11	West end Tunnel 19
West end Tunnel 12	West end Tunnel 20
East end Tunnel 13	West end Tunnel 21

Note:—Fire extinguishers at tunnels are located just inside tunnel portals.

(b) Tank Car MW-1001:

Tank Car MW-1001 with 10,000 gallons of water is kept first out at Tunnel 15 spur. A pump is mounted on deck over top of tank which can be operated by air from train line; 300 feet of fire hose on a reel; and a tool box containing fire-fighting tools and fittings. Car is equipped with headlights on each end, and extension cord is kept in tool box. Cord may be plugged into outlets on engine or into any light socket by replacing bulb with screw socket. Air line to pump is fitted with hose connection at each end of car, so that pump can be operated from either end of engine or train. A length of hose and fittings are kept in tool box to make connections. When pump is being run from train line, automatic brake valve on engine should be held in Full Release position, and engine speed increased to increase volume of air.

2. INSTRUCTIONS:

(a) Trains discovering a fire should immediately call operator so equipment can be dispatched to fire. If engine is equipped with fire fighting facilities, every effort should be made to extinguish the fire with the equipment on the engine. If it is evident that fire cannot be put out with equipment at hand and it is possible to reach tank car at Tunnel 15 spur, get that car and return to the fire. Tank car should be picked up so that it will be headed into the fire ahead of engine or train. Stake and pinch bar are included with tools on deck of tank car. Tunnels and bridges in some places are located so close together that a fire may spread to another structure. While it might not be possible to extinguish the fire in one structure, equipment should stand by to prevent fire from spreading.

Employes will use their best judgment in meeting an emergency and act in the safest and quickest way to meet the conditions.

(b) Tank Car MW-1001 must always be left, filled and first out at Tunnel 15 spur.

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Garcia to Redondo	Redondo to Hipass	Plaster City to Coyote Wells	Coyote Wells to Hipass	La Mesa Branch	Coronado Branch
ES-406, AS-407	1000-1016, 1023-1032	725	450	725	300	550	1500
GS-407	5100-5120	925	625	925	400	625	1725
ES-408, ES-408-B	1100-1128, 1150-1153	1500	1000	1500	625	.....	.....
ES-409	1170-1179	1625	1075	1625	700	.....	.....
AS-409	1270-1281	1800	1175	1800	775	.....	.....
AS-410, BS-410, ES-410	1700-1845, 1850-1869, 1900-1953	1400	900	1400	600	.....	.....
FS-412	2350-2394	1400	900	1400	600	.....	.....
BS-412	2100-2157	1400	900	1400	600	.....	.....
EF-415A, EF-415B (62:15 Gear ratio)	359-553, 925-975, 6138-6470, 8022-8303	1750	1175	1750	775	.....	.....
EF-418, EP-418	3000-3009, 3400-3727	1900	1225	1900	800	.....	.....
AF-420	4000-4009	1975	1325	1975	850	.....	.....
EF-420	4030-4087	1900	1250	1900	800	.....	.....
EF-423	5000-5017	2250	1525	2250	975	.....	.....

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES, MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, and OTHER MAXIMUM SPEEDS appearing on page 6 of Special Instructions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by time-table bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY, REGARDLESS OF TIME.

TERRITORY	FREIGHT AND MIXED AND LIGHT ENGINES
MP MP Column:	1
EASTWARD, SAN DIEGO TO EL CENTRO:	
1.10 to 3.00	10
3.00 to 5.00	20
5.00 to 7.35	30
7.35 to 7.36	15
7.36 to 14.00	30
14.00 to 14.42	20
14.42 to 15.57 (KP 0.00)	30
KP KP	
0.00 to 4.45	30
4.45 to 4.49	10
4.49 to 16.00	30
16.00 to 17.97	20
17.97 to 33.90	35
33.90 to 40.69	30
40.69 to 41.70	20
41.70 to 66.59	30
66.59 to 67.64	25
67.64 to 71.41 (MP 59.94)	30
MP MP	
59.94 to 60.36	30
60.36 to 61.28	25
61.28 to 63.44	30
63.44 to 65.58	25
65.58 to 70.41	30
70.41 to 70.75	25
70.75 to 73.75	30
73.75 to 73.95	25
73.95 to 76.09	30
76.09 to 76.77	25
76.77 to 81.79	30
81.79 to 82.07	25
82.07 to 84.50	30
84.50 to 92.90	25
92.90 to 96.61	30
96.61 to 98.67	20
98.67 to 99.10	10
99.10 to 106.56	20
106.56 to 122.50	25
122.50 to 147.53 (wye switch)	30
147.53 to 147.84 (junction switch)	10
EASTWARD, TWELFTH ST. NATIONAL CITY TO NORTH ISLAND, except	12
4.77 to 6.02	10
EASTWARD, SAN DIEGO TO EL CAJON:	
1.10 to 3.60 (Francis St.), except	10
over 13th, 14th, 28th, 30th & 32nd Sts	5
3.60 to 13.40 (Jackson Dr.), except	25
on curves between Lemon Grove and MP 13	10
13.40 to 16.80	20

TERRITORY	FREIGHT AND MIXED AND LIGHT ENGINES
MP MP Column:	1
WESTWARD, EL CENTRO TO SAN DIEGO:	
147.84 to 147.53 (wye switch)	10
147.53 to 122.50	30
122.50 to 106.56	25
106.56 to 99.10	20
99.10 to 98.67	10
98.67 to 96.61	20
96.61 to 92.90	30
92.90 to 84.50	25
84.50 to 82.07	30
82.07 to 81.79	25
81.79 to 76.77	30
76.77 to 76.09	25
76.09 to 73.95	30
73.95 to 73.75	25
73.75 to 70.75	30
70.75 to 70.41	25
70.41 to 65.58	30
65.58 to 63.44	25
63.44 to 61.28	30
61.28 to 60.36	25
60.36 to 59.94 (KP 71.41)	30
KP KP	
71.41 to 67.64	30
67.64 to 66.59	25
66.59 to 41.70	30
41.70 to 40.69	20
40.69 to 33.90	30
33.90 to 17.97	35
17.97 to 16.00	20
16.00 to 4.49	30
4.49 to 4.45	10
4.45 to 0.00 (MP 15.57)	30
MP MP	
15.57 to 14.42	30
14.42 to 14.00	20
14.00 to 7.36	30
7.36 to 7.35	15
7.35 to 5.00	30
5.00 to 3.00	20
3.00 to 1.10	10
WESTWARD, NORTH ISLAND TO TWELFTH ST. NATIONAL CITY, except	12
6.02 to 4.77	10
WESTWARD, EL CAJON TO SAN DIEGO:	
16.80 to 13.40 (Jackson Dr.)	20
13.40 to 13.00	25
13.00 to 3.60 (Francis St.), except	20
on curves between MP 13 and Lemon Grove	10
3.60 to 1.10, except	10
over 32nd, 30th, 28th, 14th & 13th Sts	5

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACK	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, crossovers and turnouts, except	10
LA MESA BRANCH: El Cajon Drill Track east of Main Street	6